

REMARKS

The Office Action dated January 23, 2008 has been reviewed and the Examiner's comments carefully considered. The present Amendment adds new claims 36-39, all in accordance with the originally-filed specification. No new matter has been added. Accordingly, claims 20-39 are pending in this application, and claims 20 and 36 are in independent form.

Initially, Applicant thanks the Examiner for considering the arguments and remarks presented in the previously-filed Amendment. In that regard, the Examiner has withdrawn the double patenting rejection of independent claim 20 in view of U.S. Patent No. 7,037,093 alone. Instead, the Examiner now rejects claim 20 on the ground of non-statutory obviousness-type double patenting as being unpatentable over the '093 patent in view of U.S. Patent No. 4,747,767 to Schnell. In particular, the Examiner believes that the claims of the '093 patent are substantially identical with the exception of the outer housing being divided into outer housing segments. The Examiner believes that the Schnell patent teaches such a feature, believing that the arrangement of the Schnell patent provides an outer housing 6 divided into outer housing segments 10.

Further, the Examiner has withdrawn the rejection of claims 20-35 under 35 U.S.C. § 102 for anticipation by previously-cited U.S. Patent No. 5,906,297 to Cole. Instead, the Examiner now rejects claims 20-35 under 35 U.S.C. § 103 for obviousness over the Cole patent in view of the Schnell patent. Again, the Examiner admits that the Cole patent fails to disclose the outer housing being divided into outer housing segments, and instead uses the Schnell patent as allegedly including such a feature. Still further, the Examiner indicates that constructing a formerly integral structure in various elements involves only routine skill in the art. In view of the following remarks, Applicant respectfully requests reconsideration of these rejections.

Summary of the Invention

As set forth in independent claim 20 of the present application, provided is a dividing device which includes an outer housing with an inlet and at least two outlets. At least two pump chambers are placed adjacently of each other in the outer housing, each having a pump chamber infeed connected to the inlet and each having a pump chamber discharge connected to the outlet. The device further includes at least two vane-type rotors, one in each pump chamber and with a rotation axis in line, each vane-type rotor including a hub provided with continuous vanes which are slidable through the hub along their longitudinal axis and almost perpendicularly of the axis of the hub. Further, the outer housing is divided into outer housing segments.

As set forth in new independent claim 36, the present invention is further directed to a dividing device including an outer housing with an inlet and at least two outlets. At least two pump chambers are placed adjacently of each other in the outer housing, each having a pump chamber infeed connected to the inlet and a pump chamber discharge connected to the outlet. At least two vane-type rotors, one in each pump chamber and with a rotation axis in line are included. Further, each vane-type rotor includes a hub provided with continuous vanes, which are slidable through the hub along their longitudinal axis and almost perpendicularly of the axis of the hub. The outer housing is divided in outer housing segments, and each outer housing segment includes a pump chamber. Each pump chamber extends into a subsequent segment so as to offset connecting seams of the outer housing segments relative to connecting seams of the pump chambers.

The Cited Prior Art

The Examiner cited the '093 patent in the prior Office Action (with respect to the double patent rejection). Applicant is well aware of this patent and its teachings, as it is

commonly owned by the owner of the present application. In response to the previous double patenting rejection, Applicant submitted that independent claim 20 is patentably distinct from claim 12 of the '093 patent. As discussed in the previously-filed Amendment, claim 12 of the '093 patent includes a segmented interior area of the dividing device, but does not set forth an arrangement where the outer housing is divided into outer housing segments, as included in both independent claims 20 and 36 of the present application. Further, it is submitted that the '093 patent does not claim an arrangement where either the inner housing or the outer housing of the dividing device is segmented. The Examiner appeared to agree with this assertion, and now uses the Schnell patent for the alleged teaching of a segmented outer housing, the teachings admittedly missing from the '093 patent.

The Schnell patent is directed to an apparatus for cutting comestible substances in discrete metered portions. With specific reference to Fig. 3, a metering pump set 6 is provided and includes 14 metering pumps 10. It appears that the Examiner is considering the metering pump set 6 (in combination) as the "outer housing," and each of the 14 metering pumps 10 varying as the "outer housing segments."

The Cole patent was cited in the previous Office Action and used in an anticipation rejection by the Examiner therein. The Examiner has now withdrawn this anticipation rejection indicating her agreement that the Cole patent fails to disclose the outer housing being divided into inner housing segments. In summary, the Cole patent is directed to a multi-outlet depositor, and the depositor includes a hub/chamber assembly 32 with a chamber 42 and a hub 44. The hub 44 is positioned with a hole in the chamber 42, and includes a pair of vanes 48, 49 that are capable of sliding along the longitudinal axis thereof within the hub 44. A set of bolts or other coupling means are placed into holes 55a-55d and into the holes of the other hub/chamber assemblies 33-35, thereby causing all of the hubs to rotate in unison.

None of the Prior Art Teaches or Suggests the Dividing Device of Claims 20 and 36

As discussed above, the Examiner admits that neither the '093 patent nor the Cole patent alone teaches or suggests a dividing device wherein the outer housing is divided into outer housing segments, as specifically set forth in independent claims 20 and 36 of the present application. Instead, the Schnell patent is used by the Examiner to supply the missing teachings. Applicant respectfully submits that the Schnell patent does not disclose an outer housing that is made up of several outer housing segments (a primary feature of independent claims 20 and 36 of the present application). In fact, the Schnell patent discloses a metering pump set 6, which consists of a plurality of gear metering pumps 10. Each gear metering pump 10 includes a pump chamber, as shown as an oblong wall in the cross-sectional view of Fig. 5. Each pump 10 further includes two wheels or rotors, a powered wheel 16 and a driven wheel 17. Nowhere in the arrangement of the Schnell patent is an outer housing enclosing the various gear metering pumps 10 disclosed. The Schnell patent actually discloses an arrangement that is basically similar to the inner part of the dividing device shown and described in the Cole patent, i.e., a plurality of separate pumps 32-35, each including a pump chamber 42 and a rotor 44, where the rotors 44 of the pumps are all connected. Accordingly, the Schnell patent does not and cannot teach or suggest a primary feature that distinguishes the claimed invention from the Cole patent and the '093 patent, i.e., the outer housing being divided into outer housing segments.

Still further, the Schnell patent actually teaches away from the claimed concept, which is primarily aimed at providing a dividing device that can be enlarged to divide a single flow into a greater number of flows by simply adding outer housing segments. The use of intermediate discs 11 of differing thickness (as shown in Fig. 3 of the Schnell

patent) would suggest to one skilled in the art that the external dimensions of the dividing device are fixed, and the number of metering pumps to be accommodated in the device can only be reduced by adding thicker intermediate discs 11, but cannot be increased. Therefore, Applicant respectfully submits that the Schnell patent does not teach or suggest a dividing device that includes an outer housing divided into outer housing segments, as specifically set forth in independent claims 20 and 36 of the present application.

On page 4 of the Office Action, the Examiner asserts that it would have been obvious to one skilled in the art to utilize an outer housing divided into outer housing segments, since "constructing a formerly integral structure in various elements involves only routine skill in the art." Applicant respectfully disagrees. One skilled in the art and involved in the food industry understands that hygiene is of the utmost importance. Therefore, the skilled artisan would normally look for ways to reduce the number of separate parts, because each connection between two parts is a possible source of leakage and entrapment of small food particles. Whenever food particles become trapped or caught in the processing device, it will eventually decay and become a source of bacteria. Therefore, the trend in the food processing industry is towards the integration of parts, as opposed to the separation and addition of more parts. Even beyond the fact that the Schnell patent does not teach or suggest an outer housing divided into outer housing segments, it is additionally submitted that it is not a matter of routine skill in the art to provide this unique feature, and certainly not obvious to the skilled artisan. It is further submitted that the claimed dividing device provides certain advantages based upon this modular construction that far outweigh the potential drawbacks of leakage and entrapment.

With specific reference to new independent claim 36 of the present application, certain sealing issues and deficiencies have been overcome by using the

additionally unique arrangement. In particular, and as set forth in independent claim 36, each outer housing segment includes a pump chamber, and each pump chamber extends into a subsequent segment so as to offset connecting seams of the outer housing segments relative to connecting seams of the pump chambers. Using this arrangement and feature, i.e., offset connecting seams, beneficial sealing is realized with an efficient and tight fit of the pump chambers in the segments. This demonstrates a still further benefit of the presently-claimed invention, which is not taught or suggested in the prior art of record. Therefore, independent claim 36 defines further patentable subject matter in addition to the unique segmented outer housing feature discussed above in connection with claim 20.

Summary

For the foregoing reasons, independent claim 20 is not anticipated by or rendered obvious over the '093 patent, the Schnell patent, the Cole patent or any of the prior art of record, whether used alone or in combination. There is no hint or suggestion in any of the references cited by the Examiner to combine these references in a manner which would render the invention, as claimed, obvious. Reconsideration of the rejection of independent claim 20 is respectfully requested. Claims 21-35 depend either directly or indirectly from and add further limitations to independent claim 20 and are believed to be allowable for at least the reasons discussed hereinabove in connection with independent claim 20.

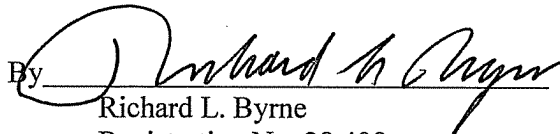
For the above reasons, independent claim 36 is not anticipated by or rendered obvious over the '093 patent, the Schnell patent, the Cole patent or any of the prior art of record, whether used alone or in combination. There is no hint or suggestion in any of the references cited by the Examiner to combine these references in a manner which would render the invention, as claimed, obvious. Allowance of new independent claim 36 is

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respectfully requested. Further, claims 37-39 depend either directly or indirectly from and add further limitations to independent claim 36 and are believed to be allowable for at least the reasons discussed hereinabove in connection with independent claim 36.

For all the foregoing reasons, Applicant believes that claims 20-39 are patentable over the cited prior art and in condition for allowance. Reconsideration of the rejections and allowance of pending claims 20-39 are respectfully requested.

Respectfully submitted,
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